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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/

Date: 17-11-2015

1. TESTING OF FINE AGGREGATES :

Sub: Testing of Fine Aggregates.
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}

Ref.: Letter No. Testing/BUB/2015-16, dated 13-11-2015

Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2007) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.00	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	83.00	60-95	75-100	85-100	
01.18	72.00	30-70	55-90	75-100	
600. mic	44.00	15-34	35-59	60-79	
300.mic	17.60	5-20	8-30	12-40	
150.mic	3.10	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2007)
1	Silt Content	001	1.46%	Not more than 8%
2.	Specific Gravity	----	2.58	-------

* As furnished by Client.
The Results relate only to the items tested.

AE-II

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

Dr MANJESH .L
ME(Civil Engg.) Ph.D. MISTE MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: manjesnl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/

Date: 17-11-2015

1. TESTING OF COARSE AGGREGATES (40 mm):

Sub: Testing of Coarse Aggregates.
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}
Ref.: Letter No. Testing/BUB/2015-16, dated 13-11-2015
Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.
Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	97.30	85-100	95 – 100
20mm	65.00	0 -20	30- 70
10mm	23.00	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1.	Flakiness Index	As above	16.20 %	Not to exceed 25 %
2.	Crushing value	----,,----	25.70%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

17/11/2015
DR. MANJESH .L
ME(Civil Engg.) Ph.D., MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: manjeshl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/

Date: 23-11-2015

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}

Ref.: Letter No. Testing/BUB/2015-16, dated 13-11-2015

Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Grade * : 53
Type * : OPC
Date : 14-11-2015 to 21-11-2015

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	**150 min**	Shall not be less than 30 min
2	Final setting time	**255min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.80%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.50 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	**29.10 N/ Sq mm** **40.60 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

23/11/2015
DR. MANJESH.L
ME(Civil Engg.) PhD, MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: maniesnl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/ **Date: 17-11-2015**

1. TEST REPORT ON REINFORCEMENT STEEL :

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}
Ref.: Letter No. Testing/BUB/2015-16, dated 13-11-2015
Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.
Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

TABLE – 1

SL No	Details	For 10mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm
02	Observed Wt/m Length **Kg/m**	**0.620**	0.567
03	Proof stress/Yield stress, fy , **N/mm^2**	**554.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**21.00**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**624.0**	545.0

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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

Dr. MANIVESH. L
ME(Civil Engg.), PhD, MIOTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: maniesnl@yahoo.com

Phone Off: 080-22961935 / 1946
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BUB/CTE/2015-16/

DATE: 23-12-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}

Ref.: Letter No. Testing/BUB/2015-16, dated 22-12-2015

Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	24-11-15	22-12-15	28	22500	520	23.11	**23.33**
	002	"	"	"	"	530	23.55	
	003	"	"	"	"	525	23.33	

* As furnished by Client.
The Results relate only to the items tested.

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

23/12/2015
Dr. MANJESH .L
ME(Civil Engg.) Ph.D. MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: manjesnl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

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DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/

DATE: 23-12-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}

Ref.: Letter No. Testing/BUB/2015-16, dated 23-12-2015

Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	25-11-15	23-12-15	28	22500	495	22.00	**22.22**
	002	"	"	"	"	510	22.66	
	003	"	"	"	"	495	22.00	

* As furnished by Client.
The Results relate only to the items tested.

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

25/12/2015
Dr. MANIESH. I.
ME(Civil Engg.) Ph.D. MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: maniesnl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/

DATE: 26-12-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Development and Concrete Road works at Naidu Layout in Kuvempunagar in Ward No.11}

Ref.: Letter No. Testing/BUB/2015-16, dated 26-12-2015

Sample supplied to lab by: Sri.N.Keerthi, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	26-11-15	26-12-15	30	22500	515	22.88	**22.88**
	002	"	"	"	"	510	22.66	
	003	"	"	"	"	520	23.11	

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AE-II

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

26/12/2015

Dr. MANJESH .L
ME(Civil Engg.) Ph.D. MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: maniesnl@yahoo.com